

Clean Air Mercury Rule Overview



Recap Presentation for EPA Region 5 and Region 7 States

June 2005



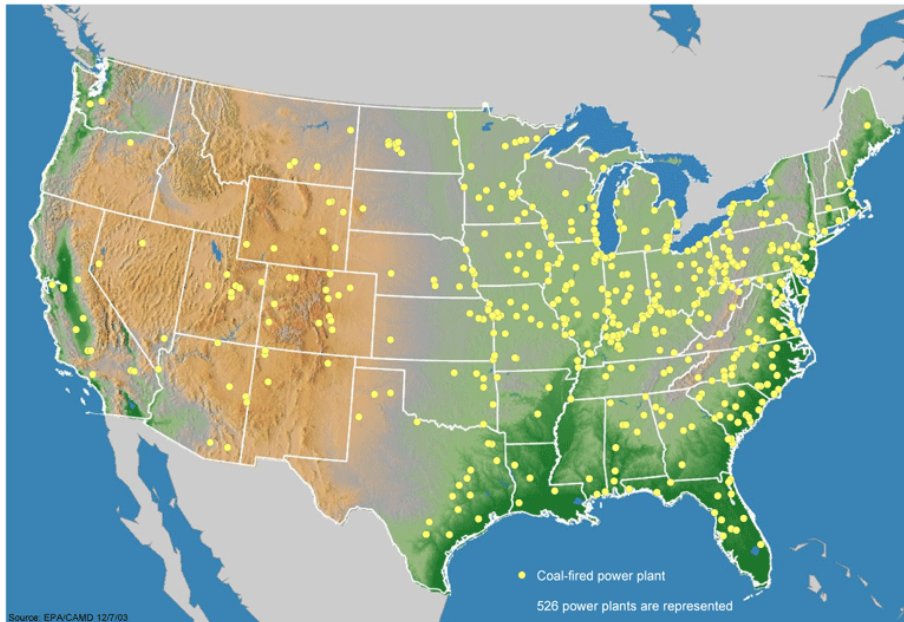
Benefits of the Clean Air Mercury Rule (CAMR)

- The Clean Air Mercury Rule will build on EPA's Clean Air Interstate Rule (CAIR) to significantly reduce emissions from coal-fired power plants -- the largest remaining sources of mercury emissions in the country.
- When fully implemented, these rules will reduce utility emissions of mercury from 48 tons a year to 15 tons, a reduction of nearly 70 percent.
- EPA's modeling shows that CAIR will significantly reduce the majority of the coal-fired power plant mercury emissions that deposit in the United States, and those reductions will occur in areas where mercury deposition is currently the highest.
- The Clean Air Mercury Rule is expected to make additional reductions in emissions that are transported regionally and deposited domestically, and it will reduce emissions that contribute to atmospheric mercury worldwide.
- Emission reductions occur while economic strength is preserved. U.S. maintains both low electricity prices and fuel diversity.



The first-ever federal rule to permanently cap and reduce mercury emissions from coal-fired power plants.

Coal Fired Power Plants in the U.S.



U.S. Coal-Fired Power Plants

- **About 1,100 coal-fired generation units (~ 500 coal-fired power plants), representing about 305 GW of generation capacity**
- **Existing Controls:**
 - Almost all units have particulate matter (PM) control devices
 - About one-third of capacity has SO₂ scrubbers
 - Most have initial NO_x controls (low-NO_x burners)
 - About one-third of the capacity (primarily in the east) will have advanced NO_x control (SCR) when NO_x SIP call is fully implemented

Revision of December 2000 Finding

- In a separate but related action, EPA revised and reversed its December 2000 finding that it was “appropriate and necessary” to regulate coal- and oil-fired power plants under section 112 of the Clean Air Act.
- EPA is taking this action because we now believe that the December 2000 finding lacked foundation and because recent information demonstrates that it is not appropriate or necessary to regulate coal- and oil-fired utility units under section 112.
- EPA is NOT delisting Hg as an air toxic on 112(b) list.
- EPA nevertheless believes it is important to reduce mercury emissions from coal-fired power plants.
- EPA has signed two complementary rules – Clean Air Interstate Rule (CAIR) and the Clean Air Mercury Rule (CAMR), issued under sections 110(a)(2)(D) and 111 of the Act, respectively.
- These rules will allow us to more effectively limit mercury emissions from coal-fired power plants.

Key Elements of CAMR

- The Clean Air Mercury Rule establishes “standards of performance” limiting mercury emissions from new and existing coal-fired power plants and creates a market-based cap-and-trade program that will reduce nationwide utility emissions of mercury in two distinct phases.
 - The first phase cap is 38 tons and emissions will be reduced by taking advantage of “co-benefit” reductions – that is, mercury reductions achieved by reducing sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions under CAIR – the new Base Case.
 - In the second phase, due in 2018, coal-fired power plants will be subject to a second cap, which will reduce emissions to 15 tons upon full implementation.
- New coal-fired power plants (“new” means construction starting on or after Jan. 30, 2004) will have to meet new source performance standards in addition to being subject to the caps.
- CAMR sets an emission reduction requirement for each State and Indian country, by distributing the national emissions cap among the States and Indian country.
- Provides an optional cap and trade program based on successful Acid Rain and NO_x Budget Trading programs as a method to implement the necessary reductions.
- Allows States flexibility on how to achieve the required reductions, including whether to join the trading program.

Cap and Trade Mechanism: Allowance Allocation and Markets

EPA ROLE

- Set state budgets
- Establish trading program and market procedures
- Administer tracking systems
- Define allowance allocation parameters

STATE ROLE

- State Plan detailing how it will meet its budget for reducing mercury from coal-fired power plants
- Voluntary trading program
 - Adopt rules/program in 18 months
 - Allocate Hg allowances

- **EPA is working to provide a smooth transition to new trading program**
 - Designed with existing cap and trade programs in mind
 - Integration with CAIR program

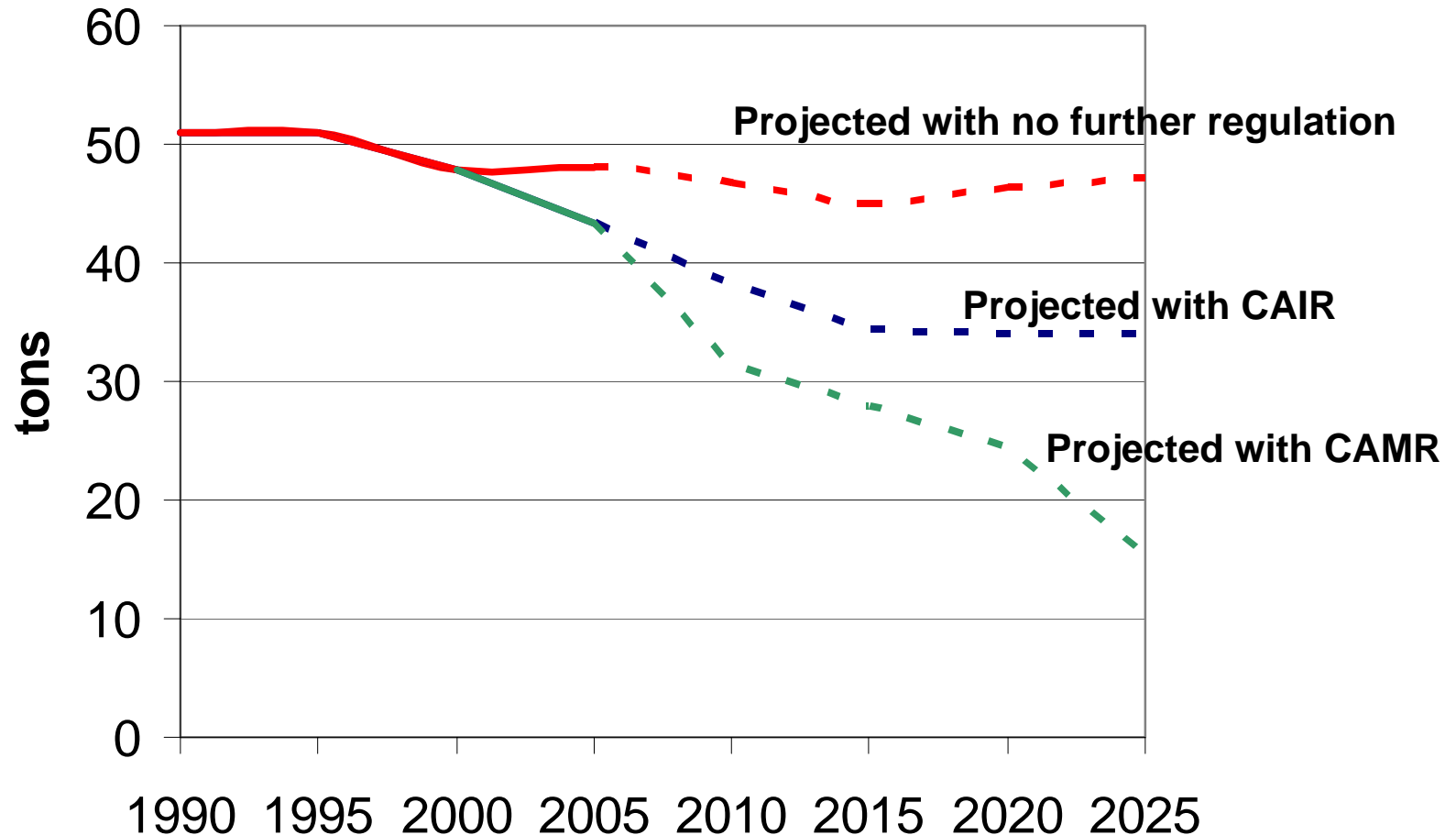
New Source Requirements

- New coal-fired power units (Subpart Da electric generating units) constructed after Jan. 30, 2004 will have to meet new source performance standards in addition to being subject to the caps.
- Since new sources are included in the cap, new sources will also need to hold allowances equal to their emissions.
- Compliance with the NSPS is determined on a 12-month rolling average basis, using data from a CEMS or sorbent trap monitoring system
- Performance Specification 12-A (certification procedure for the Hg CEMS required under Subpart Da) has also been promulgated as part of the CAMR rule package

New Source NSPS Limits:

Subcategory	Hg (10 ⁻⁶ lb/MWh)
Bituminous-fired	21
Subbituminous-fired: - Wet FGD - Dry FGD	42 78
Lignite-fired	145
IGCC	20
Coal refuse-fired	1.4

National Hg Power Plant Emissions: Historic and Projected with CAMR



Source: EPA

Note: 1999 emission estimate for utility coal boilers is based on 1999 Information Collection Request (ICR); 1990 and 1996 are based on different methodology.

State Requirements under CAMR

- States must submit a State plan under 111(d) that includes:
 - A description of control measures to meet the statewide mercury budget
 - Fully-adopted State rules for the mercury reduction strategy with compliance dates providing for control by 2010
- Each State must impose control requirements that demonstrate it will meet its assigned statewide Hg emissions budget.
- States may join the trading program by adopting or referencing the model trading rule (40 CFR part 60, subpart HHHH) in State regulations or adopting regulations that mirror the necessary components of the model trading rule.
- States' responsibilities include:
 - Identification of affected sources, permitting and allocation of allowances
 - Verification: reviewing monitoring plans and approving certification applications; observing QA testing and performing audits
 - Lead in pursuing enforcement actions
- State can choose to implement more stringent Hg emissions requirements.